CWA COMPLIANCE EVALUATION INSPECTION REPORT U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5

Purpose:	
Compliance Evaluation Sampling Inspection	
Facility:	
nonresponsive	
nom esponsive	
NPDES Permit Number: N/A	
Date of Inspection: June 19, 2019	
areas Va saagruussaa vussu sugantsi	
EPA Representatives:	
Joan Rogers, Environmental Scientist Rogers.joan@epa.gov	312-886-2785
State Representatives:	
Doug VanNattan, Environmental Protection Engineer	217-557-8761
Doug vannattan@illinois.gov	
Facility Representatives:	
nonresponsive Facility Manager	nonresponsive
· · · · · · · · · · · · · · · · · · ·	
and the second	
Inspector Signature:	
Approver Name and Title: Ryan Bahr, Chief, Water Enforcem	ent and Compliance
Assurance Branch, Section 2	re transmission de la prima de Commission de La commission de mandre de la commission de la commission de la c
R NB	
Approver Signature:	
Approval Date: 8 13 19	

1. BACKGROUND

The purpose of this report is to describe, evaluate and document the nonresponsive Swine Facility's compliance with the Clean Water Act (CWA) at its Loraine, Illinois facility on June 19, 2019. This inspection was performed pursuant to Section 308(a) of the Federal Water Pollution Control Act. as amended.

The nonresponsive Swine Facility is a swine finishing operation. Based on the number of hogs greater than fifty-five pounds, it is considered a Concentrated Animal Feeding Operation (CAFO). The facility has three barns in two different sites. The East Site consists of two barns, the North Barn and the South Barn. The West Site has the remaining third barn. The sites are approximately half a mile from each other but are on opposite sides of IL-336. Facility owners utilize the same land application equipment and fields to manage and spread the manure, so the sites are considered to be one operation.

There is a watershed boundary between the East Site and the West Site. There is an intermittent unnamed tributary that flows to the south on the west side of the East Site. This intermittent unnamed tributary has been dammed up just south of the facility to create a clean water pond. There is an outlet pipe in the pond to allow flow to leave the pond and continue south in the tributary. The flow continues in the intermittent unnamed tributary approximately 0.5 miles to perennial Woodville Branch. Woodville Branch flows 2.17 miles to perennial Thurman Creek and then another 4.8 miles to perennial South Fork Bear Creek. South Fork Bear Creek flows to Bear Creek which in turn flows to the Mississippi River.

At the West Site, flow from the production area would flow to the west approximately 0.2 miles to an intermittent unnamed tributary which flows southwest until it becomes a perennial unnamed tributary in 3.5 miles. The perennial unnamed tributary flows 1.4 miles before it flows into perennial Mud Creek. Mud Creek flows 4.1 miles before it reaches Bear Creek which flows to the Mississippi River. The Mississippi River is the first Traditional Navigable Water for the flow from either the East or West Site.

Bear Creek is on the 2016 impaired waters list and it is listed as impaired for Dissolved Oxygen (DO) and Fecal Coliform.

Illinois Environmental Protection Agency (IEPA) inspected the site on July 19, 2018. At that time, the facility was owned by the current facility manager, nonresponsive During that inspection, the IEPA inspector did not observe a discharge from the Mortality Compost Bin but did observe evidence that it had discharged process wastewater to the pond. IEPA recommended that the practices for the Mortality Compost Bin be modified to control the leachate.



2. SITE INSPECTION

Table 1: Site Entry and Opening Conference

Arrival Time:	10:50 a.m.	
Temperature:	70 °F.	
Precipitation:	It rained heavily in the morning. Quincy Regional Airport recorded 0.88 inches of rain.	
Presented credentials?	Yes.	
Credentials presented to whom and at what time?	nonresponsive Facility Manager.	
Was an opening conference held? With who	m? Yes, with the facility manager.	
If photographs or documents were taken, do be Confidential Business Information (CBI)		
Which information does the facility consider to be CBI?		
EPA vehicle parked in approved location?	Yes.	
2 - 1 2 3 3 4 5 2 3 4 4 8 E X.5	Outside the office.	
Location where EPA vehicle was parked?	Outside the othice.	
Disposable boots worn?	Yes.	

2.1 Records Review (The following Records Review tables reflect information provided after the walk-through of the facility, unless otherwise noted.)

Table 2: Documents

and the property of the state o	
Checklist(s) Used	pand out we
R5 Boilerplate Inspection Report as CAFO Inspection Checklist.	
Facility Documents Reviewed:	3
Nutrient Management Plan.	,

Table 3: Facility Description

Type of Animal	Number of Animals	Capacity	Type of Confinement
Swine > 55 pounds	nonresponsive	nonresponsive	Swine barns
Minimum Number	of Animals in p	revious 5 years:	nonresponsive
Maximum Numbe	of Animals in	previous 5 years:	nonresponsive
Number of Animals that are stabled/confined		Same as listed above.	
and/or fed/maintai	ned for 45 days	or more in	
previous 12 month	S-		
Amount of Liquid	Manure Genera	ited per year:	1.8 million gallons.

Amount of Solid Manure Generated per year:	None:
(Illinois Only) Name of Certified Livestock	nonresponsive
Manager for facility:	
(if 300 animal units or greater):	
(Illinois Only) If 1000 < AU < 5000 is a general	Yes.
worte management plan maintained of the facility?	
(Illinois Only) If AU > 5000 has a general waste	N/A.
management plan been submitted to the IDOA?	
Does the facility have an NPDES Permit?	No.
SIC or NAICS code:	0213.
CAFO Designation/Defined Date (If a designated	Defined as a CAFO based on
CAFO)	the number of animals.
CAFO Designation/Defined Reason (If a	Defined as a CAFO based on
designated CAFO)	the number of animals.
Do animals have direct access to WOUS?	No.
Are crops, vegetation, forage growth, or post	No.
harvest residues sustained in the normal growing	
season over any portion of the lot or facility where	The control of the co
animals are kept?	-
What is the area (acres) of the production area?	17.
What is the area (acres) of the pasture?	N/A.
How many employees (not counting family	2.
members)'!	-
Other facilities under common ownership (name an	d address):
East Site: 40.190N, 91.160W.	
West Site: 40.195N, 91.169W.	

Table 4: Livestock Waste Storage

Type of Storage	Storage Capacity	Type of Liner		Last Time Waste was Removed	Amount of Waste Removed	Days of Storage
3 Under Barn Pits	1 million gallons each	Concrete	No	Fall 2018	l million gallons	Approximately 18 months
Records : design?	at site of sto	rage struct	urc	No.		
Is manur	e stored for	the short t	erm?	No.		
	rds kept of t rage structi		manure	Yes. The leve		sured one time n a calendar.
	cility person ords of all di	-		N/A.		and Management of the Control of the
	cility person ords of all in			N/A.	-	

Do the facility personnel inspect and keep records of all the water lines?	Pond water is used for drinking.
Do the facility personnel perform routine visual inspections and keep records of the production area?	EPA did not ask.
Does the waste storage system have a managed outfall or discharge point?	No.
Has the facility had any documented discharges of livestock waste to surface water in the past year?	EPA did not ask.
Are there safety devices installed around any manure storage ponds?	N/A.

Table 5: Livestock Waste Management
Describe the way manure is collected and disposed of at the facility:
Manure is stored in pits beneath the barns and land applied with a drag line. The
manure is agitated before application and the manure is injected during land
application.
Describe the way used bedding is collected and disposed of at the facility:
No bedding is used
Are mortality records kept? Yes.
Describe the way mortalities are managed at the facility:
Mortalities are put into the composter and votated through three bays. Sawdust and tree
shavings are used as a carbon source for composting. The compost material is never
land applied as it disintegrates.
What type of method is used to provide Nipple waterers provide pond water to the
drinking water for the animals? hogs.
Describe the way spilled drinking water is collected and disposed of at the facility:
Spilled drinking water falls into the pits and is handled with the manure.
Describe the way mist cooling water is collected and disposed of at the facility:
No mist cooling system is used.
Describe how chemicals are stored and how used or spilled chemicals are collected and disposed of at the facility:
No chemicals are used or stored at the facility.
Describe the way water that has been used to wash/flush barns is collected and
disposed of at the facility:
The barns are washed two times per year with water from the pond. The wash water
falls into the pits and is land applied with the manure.
Describe where water comes from that is used to clean and/or flush. (Wells, city, etc.)
Water for cleaning comes from the pend.



Describe the way feed is contained and he disposed of at the facility:	low runoff from feed is collected and
Feed is contained in bulk bins and is not ex	sposed to precipitation.
	And an analysis of the Port of
If a dairy, describe how process wastews collected and disposed of at the facility:	seer from the place could really to
Not a dairy.	
If a dairy, describe how process wastewa parlor is collected and disposed of at the	~
Not a dairy.	•
If a dairy, describe how process wastewardisposed of at the facility:	ter from the cleaning of the milk tanks is
Not a dairy.	
If a dairy, how many times per day are cows milked?	N/A.

Table 6: Land Application and Disposal of Manure and Process Wastewater

Does the facility perform and keep records of the	Yes, one time per year.
manure testing?	Machine Machin
When was the last time a sample was taken of the	Fall 2018.
manure and/or process wastewater?	
Describe the process to take the manure and/or	After agitating the manure in
process wastewater sample.	the pit, a sample is dipped out
	of the manure in the pit.
Number of acres available for land application:	900.
Are land application records kept?	Land applications records are
	only kept on the tractor in the
	application software.
Who applies the manure and process wastewater	Facility Manager.
to the fields?	
Are weather conditions at time of application	Forecasts are checked to make
kept? (24 before – 24 after)	sure it is not going to rain
	within 72 hours of application.
Does the facility perform and keep records of the	An outside company, RPM,
soil testing?	performs the soil testing every
· ·	two years.
Is manure transferred off-site to another party?	Yes.
Are manure transfer records maintained?	Yes.
Do facility personnel perform periodic inspection	Yes.
of land application equipment?	

Table 7: Receiving Surface Waters

Describe the surface flow pathways:

East Site: There is an intermittent unnamed tributary that flows to the south on the west side of the East Site. This intermittent unnamed tributary has been dammed up just south of the facility to create a clean water pond. There is an outlet pipe in the pond to allow flow to leave the pond and continue south in the tributary. The flow continues in the intermittent unnamed tributary approximately 0.5 miles to perennial Woodville Branch. Woodville Branch flows 2.17 miles to perennial Thurman Creek and then another 4.8 miles to perennial South Fork Bear Creek. South Fork Bear Creek flows to Bear Creek which in turn flows to the Mississippi River.

West Site: Flow from the production area would flow to the west approximately 0.2 miles to an intermittent unnamed tributary which flows southwest until it becomes a perennial unnamed tributary in 3.5 miles. The perennial unnamed tributary flows 1.4 miles before it flows into perennial Mud Creek. Mud Creek flows 4.1 miles before it reaches Bear Creek which flows to the Mississippi River. The Mississippi River is the first Traditional Navigable Water for the flow from either the East or West Site.

How many months out of the year is there flow in the nearest surface water pathway:	12 months per year.
Are there any storm water pathways entering the facility?	No.
Are there any clean water ponds on site?	Yes, at the East Site.
What is the name of the first waterway that is identified as a Traditional Navigable Water (TNW) for surface flow from the facility?	Mississippi River.
Is the surface water pathway nearest to the facility considered to be ephemeral, intermittent or perennial?	The surface water pathway nearest to each site is intermittent.
Has the surface water pathway nearest to the facility been assessed for water quality?	The nearest surface water pathway to cither site has not been assessed for water quality.

Table 8: Nutrient Vlanagement Plan

NMP on site?	Yes.
Date NMP Submitted:	September 12, 2016.
Planner Name/Company:	Henry Wilson, Carthage, Illinois.
Date that the NMP was last	September 2018.
updated:	
Storage Description:	Storage Description is in the NMP. States that each pir is 200' x 104' x 8'.
Amount of Manure Generated:	NMP lists the amount of manure generated as 1.95 million gallons.

Capacity of Storage:	Capacity of the storage is calculated as 166,400 sq.
	feet.
Duration of Storage:	Duration of storage is listed as 568 days of storage.
Amount of Spreadable Land:	NMP lists 323 spreadable acres.
Mortality Management Plan:	NMP states that the mortalities are to be
Clean Water Diversion System:	NMP states that clean water is to be diverted away from the production area.
Direct Contact Prevention Plan:	NMP states that the animals are housed in barns.
Chemical Management Plan:	NMP has a chemical management plan.
Conservation Practices:	Conservation practices are shown on the map, like
·	maintaining distance from water features during
mencation of the second of the	land application.
Manure Testing Protocols:	Manure testing protocols are documented in the NMP.
Soil Testing Protocols:	Soil testing protocols are documented in the NMP.
Land Application Protocols:	Land application protocols are documented in the NMP.
Additional NMP comments:	Soil test results are sent to Henry Wilson. EPA observed the soil test results. The total phosphorus results were typically in the 50 – 200 ppm range for the facilities land application fields.
Does the NMP reflect the	Facility manager stated that the NMP reflects the
current operational	current operational characteristics.
characteristics?	-
Are the number of acres	Yes.
owned/leased consistent with	
what is listed in the NMP?	

Table 9: Land Application Records (details of the records reviewed)

<u> </u>	The framework was an an analysis and an analys
Land application information:	There were no land application records on site.
	Land application records are maintained on the
	GPS on the truck. Perhaps also maintained within
	the John Deere software that is used for land
	application.

Table 10: Facility Records (details of the records reviewed)

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Facility Record Information:	Other than the NMP, there were no other
	facility records on site to review during the
	inspection.

Table 11: NPDES Permit

Facility does not have an NPDES Permit.

2.2 Walkthrough of the Facility

EPA conducted the walkthrough portion of the inspection before the checklist was completed. See Attachment A – Inspection Photolog for photos and description of observations during the walkthrough.

2.3 Closing Conference and Post-Inspection

Table 12: Post Walk-Through

Was a closing conference held? With whom? Ye	s, with the facility man	nager.
Were specific Areas of Concern discussed with fa	acility personnel?	Yes.
Who were the Areas of Concern discussed with?	The facility manager.	
Were any deficiencies or areas of concern address	ssed or fixed during t	he
inspection? If so, list what was done. No.		
Compliance assistance materials given to facility	personnel:	
Beneficial Uses of Manure and Environmental Prot	ection, August 2015, L	J.S. EPA.
Environmental Quality Incentives Program (EQIP),	October 2013, USDA	NRCS.
U.S. EPA small Business Resources Information St	neet, June 2017.	8
Concentrated Animal Feeding Operations Final Rul 2008, U.S. EPA.	emaking – Fact Sheet	. October
Most Common Conservation Practices for Confined USDA/NRCS.	Livestock, February	2009,
Tax Certification Program for Livestock Waste Ma	nagement Facilities, A	ugust 2000.
JEPA.		
Exit Time:	1:00 p.m.	
Disposable Boots Left at Facility?	Yes.	
Vehicle Washed after leaving facility?	Yes.	
Date and Time that vehicle was washed:	June 20, 2019 at	
·	approximately 1	0:15 a.m.

Table 13: Waterway Documentation

List the pathway taken by EPA inspectors to document the waterway at the facility.

EPA observed the pond at the East Site and the black pipe that allows flow from the pond to continue in the intermittent unnamed tributary.

Table 14a: Sampling Information

LADIO I W. DEIMPERIC INICIDENTIALION	
Were samples taken?	Yes.
Were samples split with facility?	No.
Number of samples taken?	Two.
Was a trip blank created (done prior to entering the facility)?	Yes.
Identify which sample is the trip blank.	B01.
Were field duplicate samples taken (1 duplicate per 20 samples)?	No.
Identify which sample(s) is/are the field duplicate(s)	N/A.

Were equipment blanks taken (if more than one type of equipment was used to collect samples)?	No.		
Identify which samples were equipment blanks.	N/A.		
List chain of custody for fecal coliform samples:	EPA to PDC		
	Laboratories, Inc.		
List chain of custody for nutrient and general chemistry	EPA to R5		
samples:	Central Regional		
	Laboratory.		
Location where samples were preserved:	At the facility.		
Name of people involved with sample preservation:	Joan Rogers		
Time of sample preservation:	S01 and B01 at		
	11:33 a.m.		
	S02 at 12:56 p.m.		
Were samples shipped to a lab?	No.		
Name/Address of shipping location:	N/A.		
Date and time that samples were dropped off for shipping:	N/A.		
Did all inspectors involved with the sampling sign the chain of custody?	Yes.		
Weather conditions at the time of sample collection:	Light rain.		
Camera name and type used to photograph sample collection:	Galaxy S8		

Table 14b: Facility Sample Information

Number	Name	Location	Date	Time	Collect ur	Color/ Smell	Photo	Photographer	Method of Collection	: # of Sulfuric Acid Drops
801	Compost	From the	6/19/19	11:20	Joan	Dark brown	5.6	Joan Rogers	Grab	20 drops.
Runoff	Runoff	flow of		a.m.	Rogers	leachate				
) 	process		:		from				
	ļ	wastewater		:	:	composing		h 1 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
	İ	offihe	1		1	mortalities			for the second s	
		Mortality				mixed with			Ar norman	
	ĺ	Compost				precipitation			A	
	[Bin.				Foul odor.			1000	
B01	D (6)	At the EPA	6/19/19	11:29	Joan	Clear, No	None	Joan Rogers	Grab	10 drops.
	(5).(6)	vehicle.		a.m.	Rogers	. eéer.				
802	Field	From the	(5/) 9/19	12:47	Joan	Medium	21	Joan Rogers	Grab	20 drops
	Runoff	flow	:	n.m.	Rogers	ไมรุกษาก	1]	
		pathway in			_	. liquid with			İ	
		the crop				little odor.				
		field south								
		of the West			•					
		Site barn.			1	:				

Name of Laboratory where fecal coliform/facoli samples were taken: PDC Laboratories, Inc., 2231 West Altorfer Drive, Peoria, Illinois, 61615.

Name of Laboratory where nutrients and general cliemistry samples were taken: R5 Central Regional Laboratory, 536 South Clark Street, Chicago, Illinois, 60605.

Table 15: Sample Results

	Table 12: 2amble Re	SUHS								
Sample ID	Sample Name	Plags	Fecal Collform (MPN/100ml)	Biochemical Oxygen Demand (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Nitrate- Nitrite N (mg/L)	Ammonia as N (mg/L)	Total Phosphorus (mg/L)	Total Dissolved Solids (mg/L)	Total Suspended Solids (mg/L)
501	Compost Runoff		173,000	120 (K)	26.6 (L)	20.6	13.3	3.33	380	780
B01	(6 . x(5))		N/A	3 (K)	U(UI)	U	U	U	Ų	IJ
S02	Field Runoff		3,410	7 (K)	4.73 (L)	14.2	0.29 (J)	0.92	258	408

MPN = Most Probably Number

K = The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

L = The identification of the analyte is acceptable; the reported value may be biased low. The acmal value is expected to be greater than the reported value.

U = The analyte was not detected at or above the reported limit. The reported limit is an estimate.

J = The identification of the analyte is acceptable: the reported value is an estimate.

3. AREAS OF CONCERN

EPA observed these areas of concern:

- A. Process wastewater was observed flowing from the Mortality Compost Bin to the pead.
- B. Process wastewater was observed flowing off the crop field south of the barn on the West Site (identified as Field S in the NMP). The process wastewater flowed to a pond west of the crop field. The facility had a map showing that the field was used for land applications but did not have any records on site to show what nutrients had been applied or that any rutrients applied to the field were applied consistent with its Nutrient Management Plan.

4. LIST OF DOCUMENTS RECEIVED FROM FACILITY

EPA did not receive any documents from the facility.

5. ATTACHMENTS

- A. Inspection Photolog
- B. Aerial map of the East Site with barns, waterways and runoff pathway identified.
- C. Aerial map and topographical map of the West Site with barn, waterway and runoff pathway identified.
- D. Sample Analysis

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	•				
		e.			
					·
				8.	

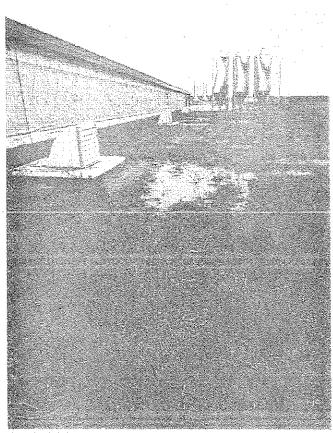
(6) (6) Swine Facility

Attachment A - Inspection Photolog EPA Inspection June 19, 2019

All photos taken by Joan Rogers, Environmental Scientist, U.S. EPA Camera: Galaxy S8

EPA arranged to meet the facility manager at the site at 11:00 a.m. after receiving permission via phone call to the owner to conduct an inspection. EPA arrived at 11:00 a.m. and informed the facility manager that they intended to do the walkthrough portion of the inspection first. The facility manager gave his approval and stated that he would not attend the walkthrough portion and that EPA was to meet him at his vehicle when done.

EPA began the walkthrough portion of the inspection at the East Site by walking south along the east side of the South Barn. It rained heavily the morning of the inspection and the rain was just ending when the walkthrough began. EPA observed standing water on the side of the barn and denuded vegetation that appeared to be nutrient burned from the pit fans. EPA did not observe any channelization from this side of the barn to waters of the U.S.



1:20190619 110345

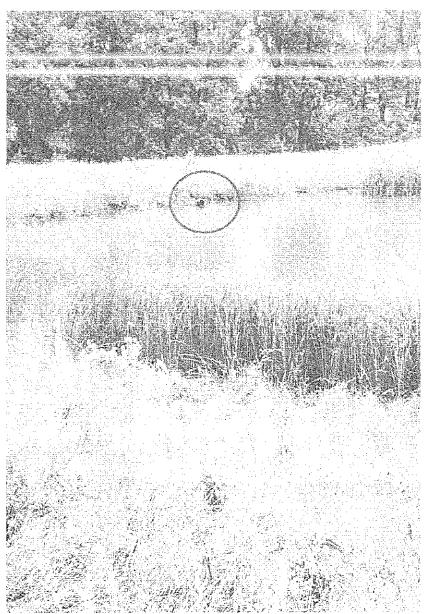
Description: Looking at the east side of the South Barn on the East Site. Vegetation appears to be nutrient burned from the pit fans. EPA did not observe any pathway of process wastewater from the side of the barn to a water of the U.S. on the day of the inspection.

Location: Southeast comer of South Barn on the East Site.

Camera Direction: North

Date/Time: June 19, 2019 11:03 a.m.

EPA then walked to the southwest corner of the South Barn on the East Site. Just southwest of the South Barn is a pond that formed from the damming up of an intermittent unnamed stream. An outlet pipe in the south berm of the pond allows flow from the pond to flow to the intermittent unnamed stream once the level reaches the height of the pipe.



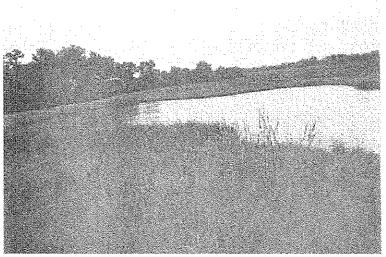
2:20190619 110535

Description: The pond southwest of the South Barn at the East Site has an outlet pipe in the southeast corner that allows flow from the pond to flow to the intermittent unnamed stream. Outlet pipe location is in the blue circle.

Location: Southwest corner of the South Barn at the East Site.

Camera Direction: South

Date/Time: June 19, 2019 11:05 a.m.



Description: Looking at the pond from south to northwest in photos 3 and 4.

Location: Southwest corner of the South Barn at the East Site.

Camera Direction: South

Date/Time: June 19, 2019 11:05 a.m.



4:20190619 110547

Description: Looking at the pond from south to northwest in photos 3 and 4.

Location: Southwest corner of the South Barn at the East Site.

Camera Direction: Northwest

Date/Time: June 19, 2019 11:05 a.m.

EPA observed the Mortality Compost Bin. The facility utilizes three bays in the bin to compost the mortalities. According to the facility manager, the bays are never emptied and land applied as the material in the bays disintegrates at very high temperatures. The open face of the bin is to the south and there is no containment for the process wastewater from the Mortality Compost Bin. EPA observed dark colored liquid mixing with precipitation and flowing to the pond.

EPA walked back to the vehicles and informed the facility manager that they intended to take a sample. EPA prepared the sample bottles and walked back to the Mortality Compost Bin.

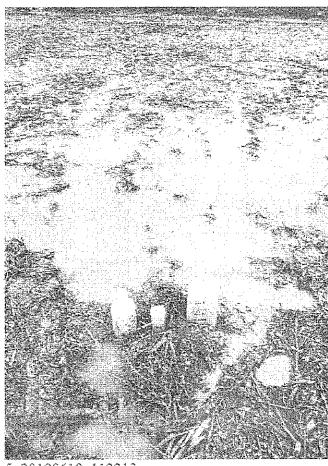
EPA took two movies at 11:13 a.m. to document the flow under the vegetation to the pond and took a sample from the dark colored liquid from the Mortality Compost Bin mixed with precipitation. EPA labeled this sample, \$01, and named it "Compost Runoff." EPA took the sample at 11:20 a.m.



Movie File #1 was taken at 11:13 a.m. and documents the flow of process wastewater to the pond through the vegetation.



Movie File #2 was taken at 11:13 a.m. and continues the documentation of the flow pathway from the Mortality Compost Bin to the channel that leads to the pond.



5: 20190619 112313

Description: Sample S01, named "Compost Runoff" was taken at 11:20 a.m. from the flow of process wastewater from the Mortality Compost Bin to the pond.

Location: South of the Mortality Compost Bin.

Camera Direction: North and down Date/Time: June 19, 2019 11:23 a.m.

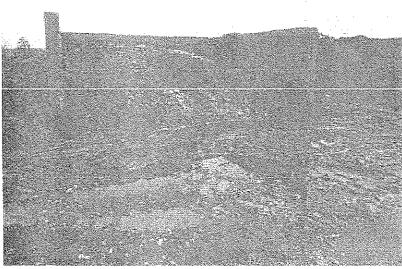
(b) (c) Swine Facility
June 19, 2019



Description: Sample S01, named "Compost Runoff" was taken at 11:20 a.m. from the flow of process wastewater from the Mortality Compost Bin to the pond.

Location: South of the Mortality Compost Bin.

Camera Direction: North and down Date/Time: June 19, 2019 11:23 a.m.



7: 20190619 112428

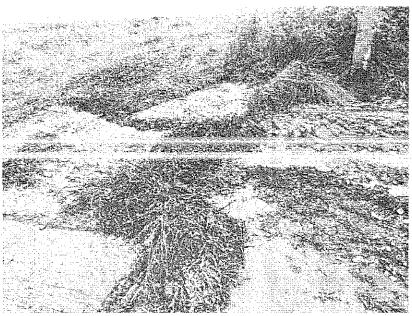
Description: There is no containment for the leachate from the mortalities at the Mortality Compost Bin.

Location: Southwest corner of the Mortality Compost Bin.

Camera Direction: Northeast

Date/Time: June 19, 2019 11:24 a.m.

The condition of the Mortality Compost Bin is the same as was documented by Illinois EPA in July 2018, EPA spoke with the owner of the facility on the morning of inspection and the owner stated that he had given instruction to the facility manager to have a cover installed over the Mortality Compost Bin immediately and believed that it had been purchased and delivered already.



8: 20190619 112433

Description: Material on the ground has been scraped by the west side of the Mortality Compost Bin.

Location: Southwest corner of the Mortality Compost Bin.

Camera Direction: North

Date/Time: June 19, 2019 11:24 a.m.



9: 20190619 112437

Description: EPA observed dark colored liquid from the mortality piles in the bays of the Mortality Compost

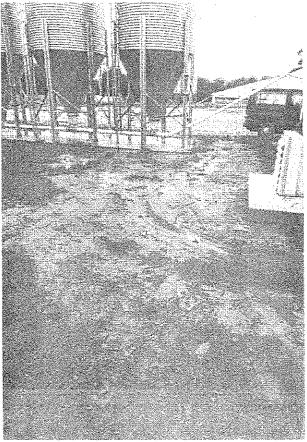
Bin mix with precipitation and flow to the south and to the pond.

Location: Southwest corner of the Mortality Compost Bin.

Camera Direction: Northeast

Date/Time: June 19, 2019 11:24 a.m.

EPA took sample S01 to the EPA vehicle and prepared a field blank, BO1, named (D) (6) at 11:29 a.m. The bottles with the nutrient samples were preserved with Sulfuric Acid at 11:33 a.m. and all samples were put on ice in a cooler. EPA then walked north along the west sides of both the South and North Barns on the East Site. EPA then walked east along the north side of the North Barn and then south to the office.



Description: Location:

Camera Direction:

Date/Time: June 19, 2019 11:35 a.m.

At the southeast corner of the North Barn on the East Site, EPA observed a denuded area near the pit fan with flow channels that flowed to the south, to the facility parking area. EPA did not observe these channels reach the pond to the southwest. In fact, the parking area was flooded near the north side of the South Barn and did not appear to have an outlet.

EPA looked to the west and observed that a turkey vulture had landed on the Mortality Compost Bin.

EPA then met with the facility manager to complete the EPA checklist and review documents. The information gathered during the checklist and records review portion of the inspection are detailed in the main portion of this inspection report.

Following completion of the checklist and records review portion of the inspection, EPA advised the facility manager that they intended to walk around the barn at the West Site. The facility manager gave his approval to do that but stated that he was not going to accompany EPA and was going to leave the facility.



Description: Turkey vulture on the Mortality Compost Bin. Location: South side of the North Barn on the East Site.

Camera Direction: West

Date/Time: June 19, 2019 11:38 a.m.



12: 20190619 120631

Description: A photo of the map of the facility's south fields for land application from the facility's Nutrient

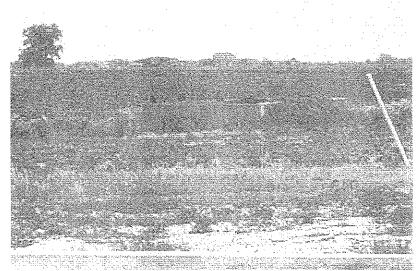
Management Plan.

Location: In the facility office. Camera Direction: Down

Date/Time: June 19, 2019 12:06 p.m.

When the checklist and records review portion of the inspection was concluded, EPA provided a closing conference to the facility manager. EPA gave the facility manager the compliance assistance materials and after summarizing each one, the facility manager dropped the materials into a garbage can.

When EPA stepped outside, they noticed that there were now at least six turkey vultures on the Mortality Compost Bin.



13: 2019(619 122342

Description: At least six turkey vultures on the Mortality Compost Bin.

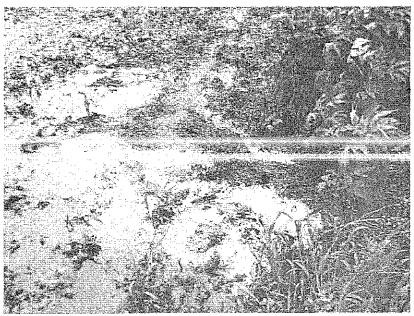
Location: South side of the North Barn on the East Site.

Camera Direction: West

Date/Time: June 19, 2019 12:23 p.m.

EPA removed disposable booties and left them in a garbage bag at the East Site, then drove to the West Site which is across IL-336 to the north.

EPA donned new disposable booties and walked clockwise around the one building at the West Site starting at the northwest corner. At the southwest corner, EPA observed vegetation by the pit fans that appeared to be nutrient burned and a pathway for precipitation from below the pit fans through a crop field just to the south of the barn and then to the west to the fenceline for the crop field. The flow in the pathway was lighter in color than the soil and crops and flowed to the fenceline on the east side of the crop field. EPA walked south along the fenceline and observed light brown and white foam and solids on the top of the liquid in the pathway. The foam and solids appeared to have flowed from the barn to the fenceline. On the other side of the fence was a pond and EPA documented the flow from this pathway at the fenceline to the pond with photos. EPA did not cross to the other side of the fenceline because it was not known who the owner of that property was.

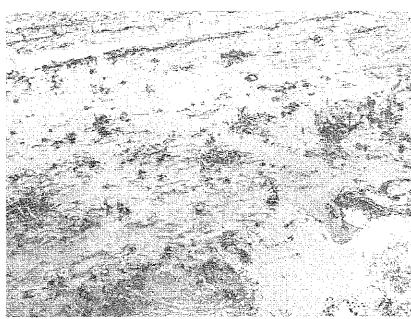


14: 20190619 123725

Description: Flow pathway from a crop field to the fenceline has light brown and white foam and solids on it.

Location: Southwest of the barn on the West Site.

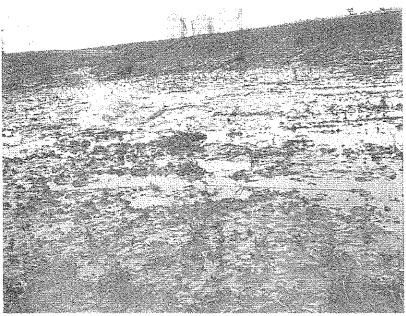
Camera Direction: South and down Date/Time: June 19, 2019 12:37 p.m.



15: 20190619 123756

Description: Heavy rains in the morning of the inspection saturated the crop field south of the barn on the West Site. EPA observed light brown and white foam and solids in the flow pathway in the crop field at the fenceline. Location: Southwest of the barn on the West Site.

Camera Direction: Southeast and down Date/Time: June 19, 2019 12:37 p.m.



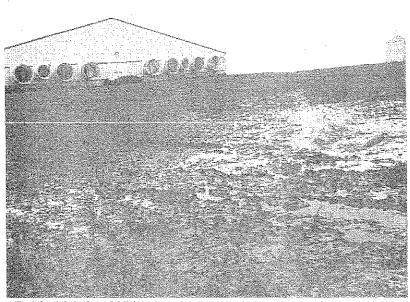
Description: Red arrow denotes the direction of flow through the crop field from the south side of the barn on

the West Site.

Location: Southwest of the barn on the West Site.

Camera Direction: Northeast

Date/Time: June 19, 2019 12:37 p.m.



17: 20190619 123801

Description: The flow of water from the south side of the barn, flows downhill through a crop field and to the

fenceline for the cropfield.

Location: Southwest of the barn on the West Site.

Camera Direction: Northeast

Date/Time: June 19, 2019 12:38 p.m.



Description: Flow channelizes and goes under the fence at the west side of the crop field.

Location: Southwest of the barn on the West Site.

Camera Direction: Down

Date/Time: June 19, 2019 12:39 p.m.

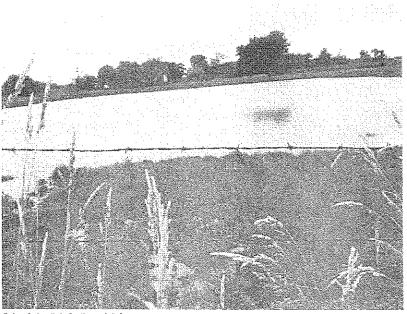


19: 20190619 123915

Description: Flow channelizes and goes under the fence at the west side of the crop field.

Location: Southwest of the barn on the West Site.

Camera Direction: West and down Date/Time: June 19, 2019 12:39 p.m.



Description: Flow channelizes and goes under the fence at the west side of the crop field and to a pond.

Location: Southwest of the barn on the West Site.

Camera Direction: West

Date/Time: June 19, 2019 12:39 p.m.

EPA then rook sample S02, named "Field Runoff" at 12:47 p.m. from the flow of liquid under the fence and to the pond. EPA walked back to the vehicle and preserved the sample at 12:56 p.m.



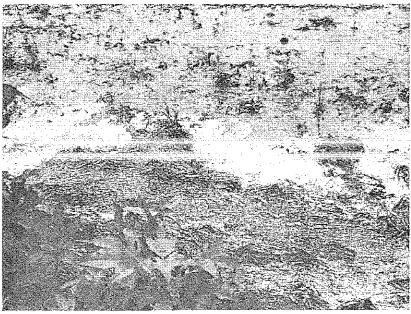
21: 20190619 125116

Description: Sample S02, "Field Runoff" was taken at 12:47 p.m. from the flow channel at the fenceline.

Location: Southwest of the barn on the West Site.

Camera Direction: Down

Date/Time: June 19, 2019 12:51 p.m.



Description: Photo of the light brown and white foam and solids in the flow pathway through the crop field.

Location: Southwest of the barn on the West Site.

Camera Direction: East

Date/Time: June 19, 2019 12:51 p.m.

EPA exited the site at 1:00 p.m. and drove the fecal coliform samples to PDC Laboratories, Inc. in Peoria, Illinois, EPA relinquished the fecal coliform samples to the lab at 3:40 p.m. The other sample bottles were kept on ice and hand delivered to the R5 Central Regional Laboratory on June 20, 2019 at 11:16 a.m.

EPA got a car wash on June 20, 2019 at approximately 10:15 a.m.

ATTACHMENT B

(b) (6) SWINE FACILITY

AERIAL MAP OF THE EAST SITE

nonresponsive

ATTACHMENT C

(b) (6) SWINE FACILITY

AERIAL MAP OF THE WEST SITE

TOPOGRAPHICAL MAP OF THE WEST SITE

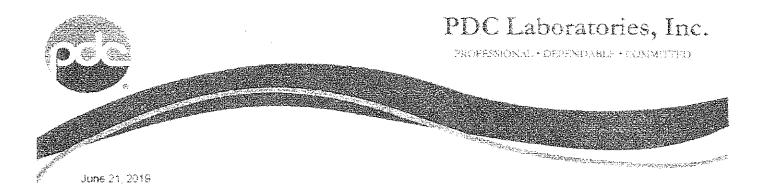
nonresponsive

nonresponsive

ATTACHMENT D

(b) (6) SWINE FACILITY

SAMPLE ANALYSIS



Joan Rogers US Environmental Protection Agency 77 W Jackson Bivd Chicago, IL 60604

Dear Joan Rogers:

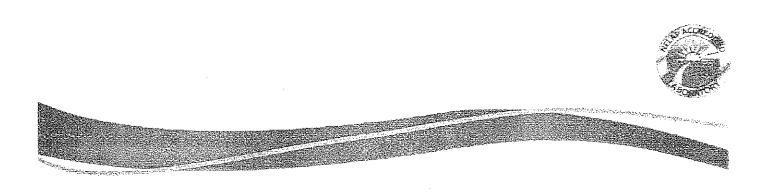
Please find enclosed the analytical results for the 2 sample(s) the laboratory received on 6/19/19-3:40 pm and logged in under work order 9963762. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of PDC Laboratories, Inc.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

PDC Laboratories, this appreciates the opportunity to provide you with analytical expense. We are always trying to improve our customer services and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-685-1764 or lyram@pddab.com.

Sincerely.

Kurt Stepping Senior Project Manager (309) 692-9688 x1719 kstepping@poclab.com





ANALYTICAL RESULTS

Sample: 9053702-01

Name: Compost Runoff

Facai colitorni baderia

Matrix: Waste Water - Grab

8410 MPN/100mL

Sampled: 06/19/19 11:20

08/19/19 18:50

Received: 05/19/19 15:40

Parameter	Result	Unit	Qualifier	Prepared	Divien	MRL	Ahaiyzed	Analysi	Method
Microbiology - PIA									
Pesal collorii badena	173006 N	APN/105mL	•	06/19/19 15/50	*0s	300	06/19/19 16:50	HAW	SM 9223E - QT
Sample: 9063762-02 Name: Field Runoff		,				Sampled: 05/19/19 12:42 Received: 05/19/19 15:45.			
Matrix: Waste VV	ater - Grab					•			
'arameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Metrod

06/19/19 16:50 . 100

SM 92235 - 077



NOTES

Specific method revisions used for analysis are available upon request.

"Not a TNI accredited analyte

Certifications

CHI - McHenry, IL - 4314 W Crystal Lake Road A, McHenry, iL 60050
TNI Accreditation for Drinking Water, Wastewater, Fields of Testing through IL EPA Lap No. 100279
Windows Department of Public Health Backenological Analysis in Drinking Water Approved Exporatory Recistry No. 17598

PIA - Peoria, IL - 2231 W Attorfer Drive, Peoria IL 61615
TNI Accreditation for Drinking Water, Wastewater, Hazardous and Solid Wastes Fields of Testing through IL EPA Lab No. 100230
Illinois Department of Public Health Bacterological Analysis in Drinking Water Approved Laboratory Registry No. 17553
Drinking Water Certifications, Iowa (240); Kansas (E-10338); Missouri (870);
Wastewater Certifications: Arkansas (88-0677), Iowa (240); Kansas (E-10338)
Hazardous/Solid Waste Certifications: Arkansas (88-0677), Iowa (240); Kansas (E-10338)

SPIL - Springfield, IL - 1210 Capital Airport Drive, Springfield, IL 62767 TNI Accreditation through IL EPA Lab No. 100323

SPIMO - Springfield, MO - 1805 W Surset Street, Springfield, MO 65807 USEPA DMR-QA Program

STL - St. Lauts. MO - 3276 N Highway 67, Florissent, MC 63933
TNI Accreditation for Wastewater, Hazardous and Solid Wastes Fields of Testing through KS Lab No. E-15389
TNI Accreditation for Wastewater. Hazardous, and Solid Waste Analysis through IL EPA No. 200080
Illinois Department of Public Health Bacteriological Analysis in Drinking Water Approved Laboratory Registry No. 171050
Missour Department of Natural Resources
Microbiological Laboratory Service for Drinking Water

Just II

CONTROL OF

Certified by: Kurt Stepping Senior Project Manager

ENVIRONMENTAL PROTECTION AGENCY Office of Entorcement REGION 6 77 West Jackson Soulevard

Office of Enforcement		CHAIN OF CUS	TODY RECORD	± .	77 West Jackson Bouleva: Chicago, Illinois 60604
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 5 CHICAGO REGIONAL LABORATORY 536 SOUTH CLARK STREET CHICAGO, ILLINOIS 60605

Date:

7/10/2019

Surject

Review of Region 5 Data for (b) (6) Swine Facility

To:

Water Division, US EPA Region 5 77 West Jackson Boulevard

Chicago, 11, 60604

From:

Francis Awanya, Chemist

US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 Guidance on Environmental Data Verification and Data Validation und the U.S. EPA Region 5 RMD QMP. CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided berein accurately represents the analysis performed.

Please contact the analyst with any technical report issues, Amanda Wroble at (312)-353-0375 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for:

Swine Facility

Analyses included in this report:

Solids, TSS

Report Name: 1906009 Solids, TSS FTNAL Jul 10 19 1513



Chicago Regional Laboratory

535 South Clark Street, Chicago, IL 60605 Phone;(312)353-8370 Pax;(312)886-2591

Water Division, US EPA Region 5

77 West Jackson Boulevard Chicago IL, 60604 Project (b) (6) Swine Facility

Project Number: JR-EPA
Project Manager: Jose Rogers

Reported: Jul-10-19 13:13

Accredited Analyses included in this Report



Memon:

5M 2540 D in Water

Anglesis:

Solids, TSS

Analyte

Certifications

Total Suspended Solids

ISO/IEC 17025:2005

Analytesiam listed above are not accredited by ANAS.

Report Name: 1906009 Solids, TSS FINAL Jul 10 19 1313



Chicago Regional Laboratory

535 South Clark Street, Chicago, IL 60505 Phone:(3121333-8370 Fex:(312)886-2391

Water Division, US EPA Region 5

TT Was hakere Basicred

Chicago FL, NOSE

Project (b) (6) Swine Facility

Project Nacional JR 594

Project Manager, Jost Kogers

Repursed:

MH019 (5-13

ANALYSIS CASE NARRATTVE

Analysis List

Selids, TSS

Analyst: Erapcis Awarya Phone #: (312)886-3682

General Information

Samples analyzed:

Sample Analysis List 1906009-01 Schos, TSS 1906009-02 Solids, TSS 1906009403 Solids, TSS

Holding times:

All holding house were men

Sample Analysis and Results

The samples were analyzed using CRL SOP AIGO18. Version # 6. The samples were stored in the refrigerator at all times, except when in use. The data reported berein meets any requirements referenced in the previously mentioned SOP and Sampling QAPP titled "GENERAL FIELD SAMPLING PLAN FOR AFO INSPECTIONS FY 2019" and reporting request for CAFO analyses of June 2014.

SOP Based on:

Method List

RM 2540 F3

Quality Control

All quality control audits were within CRL limits or did not result in qualification of the data.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER

Printed: 6/20/2019 4:44:03PM

122600

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, US EPA Region 5

Project Manager:

Angela Ockrassa Davis

Project (D. 6) Swine Facility

Project Number:

JR-EPA

Report To:

Joan Rogers

77 West Jackson Boulevard

Phone: 312-886-2785

Water Division, US EPA Region 5

Chicago, IL 60604

Fax: (312) 886-2001

Date Due:

Aug-05-19 15:00 (46 day TAT)

Received By:

Robert Snyder

Date Received:

Jun-20-19 11:16

Logged in By:

Robert Snyder

Date Logged in:

Jun-26-19 11:37

Samples Received at:

2.5 %

Work Order Companies: pFI paper used in SC=18D1901

Sample tags inhels Yes Yes

Scals Entect

Reactives on inc

Paperwork Included

Yes Yes

Sample ID: 1906009-01

Sampled: Jun-19-19 11:20

Matrix: Water

Sample Name: S01

Sample Location/Comments: Compast Runoff

Sample Comments:

Ana)ysis	Hold time (days)	Expores	Comments	
Ammoma N DA, Distilled	28	Jul-17-19 11:20	pH = 1	***************************************
BOD	2	hm-21-19 11/20	pH = 6	
Nitrate-Nitrite N DA, Enzymatic reduction	28	Jul-17-19 11:20	p34 = 4	
Solids, TDS	7	Jun-26-19 11:20	ë = Hq	
Solids, TSS	7	Jun-26-19 11:20	pH = 6	
TKN DA	28	Jul-17-19 11:20	pH=f	
Total Phosphorus DA	28	Jal-17-19 11:20	pH = 1	

Sample ID: 1906009-02

Sampled: Jun-19-19 11:27

Matrix: Water

Sample Location/Comments: (5) (6)

Sample Name: Bill Sample Comments:

Analysis	Hold time (days)	Expires	Compens	
Ammonia N DA, Distilled	28	Ini-17-19 11:27	pH = 1	
BOD	Ž	Jun-21-19 11:27	aĦ ≈ 4	
Nitrate-Nitrite N DA, Enzymatic reduction	28	Ja2-17-18-11-27	ph = 1	
Solids, TDS	, in the second	Jans-26-19 11:27	pH = 4	
Solids, TSS	7	Jun-26-19 11:27	pH = 4	

WORK CRDER

Printed: 6/20/2019 4:44:03PM

1906009

US EPA Region 5 Chicago Regional Laboratory

Chept. Water Division, US EPA Region 5

Project Manager:

Angela Ockrassa Davis

Project: (6)(6) Swine Facility

Project Number:

Sample ID: 1906009-02

Sampled: Jun-19-19 11:27

Matrix: Water

Sample Name: B01

Sample Location/Comments: (b) (6)

Sample Comments:

Apalysis	Bold time (days)	Expires	Comments
TKIN DA	- 28	Jul-17-19 11:27	p(l) = 1
Total Phosphorus DA	28	301-17-19 13:27	PH = 1

Sample ID: 1906009-03

Sampled: Jun-19-19 11:47

Matrix: Water

Sample Name: S02

Sample Location/Comments: Field Runoff

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonis N DA, Dispilled	2.8	Jul-17-19 31:47	pH = 1	***************************************
BOD		Jun-21-19 (1):47	pH = 5	
Mitrate-Mitrite N DA. Enzymatic raduction	28	Juš-17-19 33:47	pE = 1	
Solids, TDS	7	lum-26-19 11:47	pli = 5	
Solids, TSS	-	Jun-26-19 11:47	$\mathbf{p}_{12} = 2$	
TKN DA	28	Jul-17-19 13:47	pH = :	
Total Phosphorus DA	28	Jul-17-19 11:47	pH = 1	

REVIEWED

By Amanda Wroble at 4:44 pm, Jun 20, 2019

Reviewed By



Chicago Regional Laboratory

Water Division, US liPA Region 5

Project: Ragan Peter Swine Facility

77 West Jackson Boulevard

Project Number: JR-EPA

Reported: Jul-10-19 (2:13

Cincago II., 60604

Project Manager; Jose Rogers

•

Total Suspended Solids, SM 2540 D (modified) US EPA Region 5 Chicago Regional Laboratory

S61 (1906069-81)	Matrix; Water	Samp	led: Jun-	9-19 11:20	Receiv	ed: Jun-20-)	19 11:16		1
Analyte	Kesuli	Piags / Qualificas	MDI.	Reporting Limi	Units	Dilution	Barch	Prepared	Anslyzzei
Total Suspended Solids	780		. š	\$	ngfi.	1	BIPPN7	Jur-25-19	hao-25-19
801 (1906009-02)	Matrix: Water	Samp	dest: Jun-	19-19 11:27	Receiv	red: Jun-20-	19 11:16		
Analyse	Result	Flags / Qualifiers	мDi.	Reporting Limit	Units	Dilusion	Batok	Propared	Analyzsi
Total Suppended Solids	t)		3	Section control of the Co		1	B19F017	Jun-25-19)un=25-19
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Ausalyte	Kesul	Flags / Qualificats	ZGM	Reporting Limit	Units	Dilucia	Batch	Proparti	Analyzzi
Total Suspended Solids	48) *	······································		5	mg/L)	8198017	Jano-25-19	Jen-25-19

Report Name: 1906009 Solids, TSS FENAL Jul 10 19 1313



Chicago Regional Laboratory

536 South Clark Street, Chicago, il. 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US FPA Region 5

77 West Jackson Boulevard Chicago II., 60504 Project (016) Swine Facility

Project Number: JR-EPA Project Manager: Joan Rogers Repartedi

36-70-19 13:33

Notes and Definitions

U

Not Detected

N.P.

Not Reported

Q

QC limit Exceeded

Report Name 1906009 Solids, TSS FINAL Jul 10 19 1313



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 5 CHOCAGO REGIONAL LABORATORY 536 SOUTH CLARK STREET CHICAGO, ILLINOIS 60605

Date:

7/10/2019

Subject:

Review of Region 5 Data for (0) (6) Swine Facility

To:

Water Division, US EPA Region 5

77 West Jackson Boulevard

Chicago, IL 60614

From:

Francis Awanya, Chemist

US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 Guidance on Environmental Data Verification and Data Validation and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided berein accurately represents the analysis performed.

Please contact the analyst with any technical report issues, Amando Wroble at (3/2)-353-0375 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you

Attached are Results for:

(b) (6) Swine Facility

Analyses included in this report:

Solids, TDS

Report Name: 1906009 Solids, TDS FINAL Inl 10 19 1259



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5

77 West Jackson Boulevard

Chicago 11 60604

Project: (6) (5) Swine Facility

Project Number: JR-EPA

Project Manager Joan Rogers

Reported:

Jun-10-10 12:50

Accredited Analyses included in this Report



Method:

SM 2546 C in Water

Solids, TDS Anarysis:

Analyte

Certifications

Total Dissolved Solids

ISO/IEC 1702512085

Applyees not listed above are not averedited by ANAS.

Report Name: 1906009 Solids, TDS FINAL Int 10 19 1259



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5

Project (b) (6) Swine Facility

77 West Jackson Boulevard

Project Number JR EPA

Reported:

Chicage IL, 60664

Project Manager: Joan Rogers

Jul-10-19 12:59

ANALYSIS CASE NARRATIVE

Analysis List

Solias, TDS

Analyst: <u>Prancis Awanya</u> Phone #: (3)2)886-3682

General Information

Samples analyzed:

Sample

Analysis List

1906009-01

Solids, TDS

1906009-02

Solids, TDS

1906009-03

Solids, TDS

Holding times:

All holding times were met.

Sample Analysis and Results

The samples were analyzed using CRL SOP AIGO17, Version # 6. The samples were stored in the refrigerator at all times, except when in use. The data reported herein meets any requirements referenced in the previously mentioned SOP and Sampling QAPP titled "GENERAL FIELD SAMPLING PLAN FOR AFO INSPECTIONS FY 2019" and reporting request for CAPO analyses of June 2014.

SOP Based on:

Method List

SM 2540 C

Quality Control

All quality control audits were within CRL limits or did not result in qualification of the data.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Fax:(312)886-2591 Phone:(312)353-8370

WORK ORDER

Printed: 6/20/2019 4:44:03PM

1906009

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, US EPA Region 5

Project Manager:

Angela Ockrassa Davis

Project: (5) (6) Swine Facility

Project Number:

JR-EPA

Report To:

Joan Rogers

77 West Jackson Boulevard

Phone: 312-886-2785

Water Division, US EPA Region 5

Chicago, IL 69604

Fax: (312) 886-2001

Date Due:

Ang-05-19 15:00 (46 day TAT)

Received By:

Robert Snyder

Date Received:

Jun-20-19 11:16

Logged in Hy:

Robert Snyder

Date Logged in:

Jun-20-19 11:37

Samples Received at

23 %

Work Order Comments: pH paper used in SC=18D1901

Szapic presidents Scals Intact

Yes

Yes

Received on icc Paperwork bacteried

4.4 Yes

Sample 1D: 1946009-01

Sampled: Jun-19-19 11:20

Matrix: Water

Sample Name: S01

Sample Location/Comments: Compost Runoff

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA, Distilled	28	Jul-15-19 11:20	pH = 1	
BOD	2	Jun-25-19 11:20	pH = 6	•
Nitrate-Nitrite N DA, Enzymatic reduction	28	Jul-17-19 11:20	pH = 1	
Solids, TDS	7	Jun-26-19 11:20	pH = 6	
Solids, TSS	7	Jun-26-19 11:20	pH = 6	
TKN DA	28	Jul-17-19 11:26	$t={\mathbb H}_{\mathbb Q}$	
Total Phospherus DA	28	Jul-17-19 11:20	$\mathfrak{p}H=1$	

Sample ID: 1906009-62

Sampled: Jun-19-19 11:27

Matrix: Water

Sample Name: B01

Sample Location/Comments: (6) (6)

Sample Comments:

Contraction Commencers.				
Analysis	Hold time (days)	Expires	Comments	
Ammonie N.DA, Distilled	2.8	Jul-17-19 11:27	pH = 1	
BOD	2	Jun-27-19 13:27	pH == 4	
Nitrate-Nitrite N D.A., Enzymatic reduction	28	Jul-17-19 11:27	1 = Hq	
Soliás, TDS	7	Jun-26-19 11:27	p31 = 4	
Solids, TSS	7	Jun-26-19 51:27	pH = 4	

Printed: 6/20/2019 4:44:03PM

1906009

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, US EPA Region 5

Project Manager:

Angela Ockrassa Davis

Project: (b) (6) Swine Facility

Project Number:

JR-EPA

Sample ID: 1906009-02

Sampled: Jun-19-19 11:27

Matrix: Water

Sample Name: B01

Sample Location/Comments: (b) (6)

Sample Comments:

Analysis	Buid time (days)	Expires	Comments	
TKN DA	28	Jul-17-19 11:27	pH = i	
Total Phosphorus DA	28	Jul-17-19 11:27	pH = 1	

Sample ID: 1906009-03

Sampled: Jun-19-19 11:47

Matrix: Water

Sample Name: S02

Sample Location/Comments: Field Runoff

Sample Comments:

Analysis	Hold time (dæys)	Expires	Comments	
Ammonia N DA, Distilled	28	Jul-17-19 11:47	pH = 1	
BOD	2	Jun-31-19 11:47	pH = 5	
Nitrate-Nitrite N DA, Enzymatic reduction	28	Jul-17-19 11:47	pH = 1	
Solids, TDS	";	Jun-26-19 11:47	pH = 5	
Solids, TSS	7	Jun-26-19 13:47	pH = 5	
TKN DA	28	Jul-17-19 10:47	pH = 1	
Total Phosphorus DA	28	Jul-17-19 11:47	při = I	

REVIEWED

By Amanda Wroble at 4:44 pm, Jun 20, 2019

Reviewed By

Date



Chicago Regional Laboratory

536 South Clark Street, Chicago, E. 60605 Phoner(312)353-8570 Fex:(312)886-2591

Water Division, US EPA Region 5

Project (0) (6) Swine Facility

77 West Jackson Boulevard

Chicago II. 60604

Project Number: JR-EPA

Reparted:

Jb0-10-19 12:59

Project Manager, Joan Ropers

Dissolved Solids, SM 2540C (modified) US EPA Region 5 Chicago Regional Laboratory

S01 (1906009-01)	Matrix: Water	Sarap	ied: Jun-	19-19-11:20	Receiv	ed: Jun-26-	9 11:16		
Analyte	Result	Plage / Qualifien	MDL	Reporting Limit	Units	Diamico	Barob	Proparai	Ana)y29d
Total Dissolved Solids	386		16.0	20.0	ngħ.	1	8797018	Jun-25-19	Jus-25-19
B01 (1906009-02)	Matrix: Water	Samp	led: Jaa-	19-19 11:27	Receiv	ed: Jun-20-	19 11:16		
Analyte	Resub	Flags / Qualitien	MDL	Reporting Linds	Units	Disnier	Reich	Ртеритес	Analyzeč
Total Dissolved Solids	Ľ		36.0	20.0	mg/L.	1	H19FV18	Jest-25-19	Jun-25-19
S02 (1906009-03)	Matrix: Water	Samp	led: Jun-	19-19 11:47	Receiv	ed: Jun-20-1	9 11:16		
Analyse	Rasah	Flegs / Qualifiers	МЛ	Reporting Lime:	Unes	[)ની ા દબભા	Barch	Propercei	Apalynesi
Total Dissolved Solids	25%		35.0	20.0	m <u>e</u> A.	.)	6165018	7nn-25-19	June 25-19

Report Name: 1905009 Solids, TDS FINAL Jul 10 19 1259



Chicago Regional Laboratory

536 South Clark Street, Cnicago, IL 60605 Phone;(312)353-8370 Fax:(312)886-259)

Water Division, US EPA Region 5

77 West Jackson Boulevard

Chicago III, 60664

Project: (b) (6) Swine Facility

Project Number: JR-EPA Project Manager: Joan Rogers Reported:

hal-10-19 12:59

Notes and Definitions

U

Not Desected.

NR

Not Reported

Q

QC innit Exceeded



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 5 CHICAGO REGIONAL LABORATORY 536 SOUTH CLARK STREET CHICAGO, ILLENOIS 60605

Date:

7/18/2019

Subjects

Review of Region 5 Data for 60 6 Swine Facility

Ter

Water Division, US EPA Region 5

77 West Jackson Boulevard

Chicago, IL 60604

From:

Edgar Santiago, Analyst

US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 Guidance on Environmental Data Verification and Data Validation and the U.S. EPA Region 5 RMD QMP. CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

Please contact the analyst with any technical report issues, Amando Wrobie at (312)-353-0375 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for:

(6) (6) Swine Facility

Analyses included in this report:

BOD

Report Name: 1906009 BOD FINAL Jul 18 19 0959



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-259)

Water Division, US EPA Region S

77 West Jackson Boolevard

Chicago IL 60604

Project (b) (6) Swme Facility

Project Number: IR-EVA

Project Mainiger. Jose Royers

Reported:

Jul-18-19 09:59

Accredited Analyses included in this Report



Method:

SM 5210 B in Water

Analysis:

BOD

Analyte

Certifications

Biochemical Oxygen Demand

ISO/IEC 17025:2005

Authors not listed shows are not accredited by ANAB.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(3)23886-2591

Water Division, US EPA Region 5

77 Wast Jackson Boulevard

Chicago IL, 60604

Project. (b) (6) Swine Facility

Project Number: JR-EPA Project Manager: Joan Rogers Hepurtee

Jul-18-19 09:59

ANALYSIS CASE NARRATIVE

Analyst Phone Number: 312-353-5521

GENERAL INFORMATION:

Three water samples collected for 5-day biochemical oxygen demand (BODs) analyses was received at the Analytical Services Branch (ASB) on 06/20/2019 and assigned WO# 1906009. The samples met the temperature preservation requirement of less than or equal to 6 °C. The samples were analyzed within the 48-hour hold time. The designated analyst, Edgar Santiago, can be reached at 312-353-5521.

The samples were prepared and analyzed for BODs using ASB Standard Operating Procedure AlG006A: Version 5.

SAMPLE ANALYSIS:

The data reported herein meets the requirements referenced in the SGP used for analysis and any laboratory specifications stated in the General Field Sampling Plan for AFO Inspections, dated FY 2019. ASB reporting limit requirements were men.

The result for sample number 1906009-01 was flagged K - The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

Sample numbers' 1906009-02 and 1906009-03 did not have a valid DO depletion of at least 2 mg/L across the dilution series that was tested. This was likely due to little or no demand in the samples. The results were above the reporting limit and flagged K. The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

See quality control section for an explanation of the estimated flags.

QUALITY CONTROL (QC):

All required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within ASBs QC limits with the following exceptions:

Preparation Blanks (BLK) and Calibration Checks:

One out of the two preparation blanks (BLK) was slightly outside of the QC limit of ±/- 0.20 mg/L at -0.27 mg/L. The calibration checks bracketing the samples on the final day of readings drifted out of the tolerance of ±/- 0.20 mg/L from the expected DO. The greatest drift was at -0.51 mg/L from the expected DO. The drift in the meter calibration caused the results to be flagged with a potential high bias as mentioned above.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Fax:(312)886-2591 Phone:(312)353-8370

WORK ORDER

Printed: 6/20/2019 4:44:03PM

1906009

US EPA Region 5 Chicago Regional Laboratory

Water Division, US EPA Region 5

Project Manager:

Angela Ockrassa Davis

Project: (6) (6) Swine Pacifity

Project Number:

JR-EPA

Report To:

Joan Rogers

77 West Jackson Boulevard

Phone: 312-886-2785

Water Division, US EPA Region 5

Chicago, IL 60604

Fax: (312) 886-2001

Date Due:

Aug-05-19 15:00 (46 day TAT)

Received By:

Robert Snyder

Date Received:

Jun-20-)9 11:16

Logged in By:

Robert Snyder

Date Logged ha

Jun-20-19 11:37

Samples Received au Sample tags/labels

1.5 ℃

Work Order Comments: pH paper used in SC=13D1901

Seals lataca

Yes

Received on ice

ics

Paperwood Inchiced

Yes

Sample ID: 1905009-01

Sampled: Jun-19-19 11:20

Matrix: Water

Sample Name: S81

Sample Location/Comments: Compost Ranoff

Sample Comments:

Analysis	Bod time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Jul-17-19 11:20	pk or i
BOD -	2	Jun-21-39 11:20	pH = 6
Nitrate-Nitrite N DA, Enzymatic reduction	28	Jui-17-19 11:20	pH = 1
Sobds, TDS	7	Jun-26-19 11:20	pH = 6
Solids, TSS	7	Jun-26-19 11:20	pH = 6
TKN DA	28	Int-17-19 14:20	$I = H_{\mathbf{Q}}$
Total Phosphorus DA	28	Jul-17-19 11:20	pH = 1

Sample ID: 1906009-02

Sampled: Jun-19-19 11:27

Matrix: Water

Sample Name: B01

Sample Location/Comments: (6)(6)

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N DA. Disulled	28	Jul-17-19 11:27	pH = }	
BOD	2	Am-2)-19 11:27	pH = 4	
Nitrate-Nitrite N DA, Enzymatic reduction	28	Jul-17-19 11:27	pH = 1	
Solids, TDS	. 💠	hm-26-19 (1.27	38.2 m ≥	
Solids, TSS	.	has-26-19 11:27	p)-1 == 4	

WORK ORDER

Printed: 6/20/2019 4:44:05PM

1906009

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, US EPA Region 5

Project Manager:

Angela Ockrassa Davis

Project: (6) (6) Swine Facility

Project Number:

JR-EPA

Sample ID: 1906009-02

Sampled: Jun-19-19 11:27

Matrix: Water

Sample Name: Bill

Sample Location/Comments: Ragan Peter

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	· · · · · · · · · · · · · · · · · · ·
TKIN DA	28	Jul-17-19 11:27		
Total Phosphorus DA	. 28	301-17-19 11:27	pH = 1	

Sample ID: 1906009-03

Sampled: Jun-19-19 11:47

Matrix: Water

Sample Name: S02

Sample Location/Comments: Field Runoff

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia NDA, Distilled		Jul-17-19 13:37	pH = 1	
BOD	. 2	Jun-21-19 11:47	pH = 5	
Nitrate-Nitrite N DA, Enzymatic reduction	28	141-17-19-31,47). F. F. L.	
Solids, TDS	7	Jun-25-19 11-47	pH = 3	
Solids, TSS	7	Jun-25-19 1.147	ph = 5	
TKN DA	28	16-17-4-11-47	p}	
Total Paosphorus DA	28	Jul-17-39 21.47	्रों ल है	
				·

REVIEWED

By Amanda Wroble at 4:44 pm, Jun 20, 2019

Reviewed By

Date



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Faxi(312)886-2591

Water Division, US EPA Region 5

27 West Jackson Figure and Chicago II., 60664

Project. (b) (6) Swine Facility

Privace Number 18-894

Reparted: Jul-18-19 (19:59

Project Mahager: Joan Rosers

BOD, 5 day, SM 5210 B (modified) US EPA Region 5 Chicago Regional Laboratory

S01 (1906009-61)	Matrix: Water	Samp	ded: Jore)	19-19 11:20	Receiv	red: Jun-26-1	9 11:16		
Analyte	Result	Flags : (nælifiers	SON	Repending Limit	Unis	Divioc	.Bavio	Prepared	Apalyeed
Biochemical Oxygen Demand	120	X		n n	In Fig.	1	B19F(06	Энц-20-19	Jun+2(1+19
Extra 27 Falled Archite 17.75	X4 V\$1	σ	.1.3.3	ኔ£ስ ሚፈር ጥሂ . የታማ	23		1 ft 4 7 . 9 ?		

B01 (1906009-02)	Matrix: Water	r Samp	ded:un-	19-19 11:27	Receiv	ed: Jun-26-1	19 11:16		
Andyte	Result	Flues / Qualifiers	MOL	Kapordn <u>e</u> Lizak	Umts	Diturion	Barch	Propareć	Amatyzed
Binchemical (hygen Demand	3	K.		2	me/L)	B19F016	han-20-19	.haz-26-35

S#2 (1986049-#3)	Matrix: Water	Samp	iea: Jun-1	9-19 11:47	Receiv	red: Jun-24-1	931:16		
Analyie	Result	Fings Qualifiers	MDL	Aspertus Limit	Uza.	Danes	Baice	Propered	Analyzed
Buchemica) Oxygen Demand	7	К		÷	الهبد	;	B19P01¢	Jun-20-19	Jan-30-19

Report Name: 1906009 BOD FINAL Jul 18 19 0959



Chicago Regional Laboratory

Water Division, US_EPA Region 5 Project. D.6 Swine Facility

77 West Jackson Boulevard Project Number, JR-EPA keparteb
Chicago IL 60604 Project Manager: Jose Rogers Jul-18-19 09:59

Notes and Definitions

K	The identification of the analyte is acceptable; the renorted value may be triased high. The actual value is expected to be less than the reported value.
U	Not Detected
NR	Not Reported
Q	QC limit Exceeded



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 5 CHOCAGO REGIONAL LABORATORY 536 SOUTH CLARK STREET CHICAGO, ILLINOIS 60605

Date:

7/18/2019

Subject

Review of Region 5 Data for (D) (G) Swine Facility

Tu:

Water Division, US EPA Region 5 77 West Jackson Boulevard

Chicago, IL 60604

From:

Anna Knoebel, Chemist

US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 Guidance on Environmental Data Verification and Data Validation and the U.S. EPA Region 5 RMD-QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided berein accurately represents the analysis performed.

Arma front

Please contact the analyst with any technical report issues, Amanda Wroble at (312)-353-(1375 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you

Attached are Results for:

(a) (6) Swine Facility

Analyses included in this report:

Nitrate-Nitrite N DA, Enzymatic reduction

Report Name: 1906009 Nitrate-Nitrite N DA, Enzymatic reduction FINAL Jul 18 19 1349



Chicago Regional Laboratory

536 South Clark Street, Chicago, E. 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5

Project (0) (6) Swine Facility

77 West Jackson Boulevard

Chicago TL, 60604

Project Namber: JR-EPA Project Manager: Joan Rogers Reported:

hal-18-15 15:49

Accredited Analyses included in this Report



Method:

NECI Method NO7-0003 in Water

Analysis:

Nitrate-Nitrite N DA, Enzymatic reduction

Analyte

Certifications

Nicrate-Nicrite N

180-IEC 17025.2005

Analytes not listed above are not accredited by ANAB.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 50695 Phone:(312)353-8370 Fex:(312)886-2591

Water Division, US EPA Region 5

75 West Jackson Boulevard

Project. (b) (6) Swine Pacility

Project Number: JR-EPA

Remarket: Jul-18-19 13:49

Chicago IL, 60604

Project Manager: Joan Rogers

ANALYSIS CASE NARRATIVE

Analysis List

Nitrate-Nitrite N D.A., Enzymatic reduction

Analyst: Anna Knoebel

Phone #: 312-353-9467

General Information

Samples unalyzed:

Sample

Analysis List

1906009-01

Nitrate-Nitrite N DA, Enzymatic reduction

1906009-02

Nitrate-Nitrite N DA, Enzymatic reduction

1906009-03

Nitrate-Nitrite N DA. Bazymatic reduction

Holding times:

All holding times were met.

Sample Analysis and Results

The samples were analyzed using CRL SOP AIG031B, Version #5. The samples were stored in the refrigerator at all times, except when in use. The data reported herein meets any requirements referenced in the previously mentioned SOP and Sampling QAPP titled "GENERAL FIELD SAMPLING PLAN FOR AFO INSPECTIONS FY 2019" and reporting request for CAFO analyses of June 2014.

SOP Based on:

Method List

NECi Method NO7-0003

Quality Control

All quality control audits were within CRL limits or did not result in qualification of the data except for any listed below.

BIPG012-MSI Source Sumple: 1906009-01 - ISO11

Recovery for Nitrane-Marine S. (30%), was available acceptance limits (90-110%)

The spike was athreed our, no qualifiers were necessary.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER

Printed: 6/20/2019 4:44:03PM

1906009

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, US EPA Region 5

Project: (b) (6) Swine Facility

Project Manager:

Angela Ockrassa Davis

Project Number:

JR-EPA

Report To:

Joan Rogers Water Division, US EPA Region 5 77 West Jackson Boulevard Chicago, IL 60604

Phone: 312-886-2785

Pax: (3),2) 886-2001

Date Due:

Aug-05-19 15:00 (46 day TAT)

Received By: Logged in By: Robert Snyder

Robert Snyder

Date Received:

Jun-20-19 11:16

Date Logged In:

Jun-20-19 11:37

Samples Recai sed ac Sample tage/labels

2.5 ℃

Yes

Seels Image

Yes

Received on loc Paperwork Included

Yes Yes

Work Order Comments:

มได้ paper used in SC=1SD1901

Sample ID: 1906009-01

Sampled: Jun-19-19 11:20

Matrix: Water

Sample Name: SU1

Sample Location/Comments: Compost Runoff

Sample Comments:

Hold time (days)	Expires	Comments		
28	Jul-17-19 11:20	pH = }		***************************************
F	Juni-21-19 11:20	pH = 6		
28	Jul-17-19 (1:20	p14 = 1	1	
7	Jun-26-19 11:20	рН = 6		
7	Jun-26-19 11:20	9 = Hq		
28	Jul-17-19 11:26	p)4 = :		
28	Jul-17-19 11:20	pH = 1		
	28 2 28 7 .7 28	28 Jul-17-19 11:20 2 Jun-21-19 11:20 28 Jul-17-19 (1:20 7 Jun-26-19 11:20 7 Jun-26-19 11:20 28 Jul-17-19 11:20	28	28

Sample ID: 1906009-02

Sampled: Jun-19-19 11:27

Matrix: Water

Sample Name: B#1

Sample Location/Comments(b) (6)

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Ammonia N.DA, Distilled	28	Jul-17-19 11:27	pH = 1	
BOD	2	Jun-21-19 11:27	pH = 4	
Nitrate-Nitrite N DA, Enzymatic reduction	28	Jul-17-19 11:27	भारत है ।	
Solids, TDS	7	Jun-26-19 1):27	pH ≈ 4	
Solids, TSS	-	Jup-26-19 11:27	pH = 4	

Printed: 6/20/2019 4:44:03PM

1906009

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, US EPA Region 5

Project Manager:

Angela Ockrassa Davis

Project: (b) (6) Swine Facility

Project Number: JR-EPA

Sample ID: 1906009-02

Sampled: Jun-19-19 11:27

Matrix. Water

Sample Location/Comments: (6) (6)

Sample Name; B01 Sample Comments:

Ánalysis	Holá tíme (days)	Expires	Comments	
TION DA	28	hul-17-19 11:27	i = Fig	
Total Phosphorus DA	28	Jul-17-19 11:27	pH=1	

Sample ID: 1906009-03

Sampled: Jun-19-19 11:47

Matrix: Water

Sample Name: 502

Sample Location/Comments: Field Runoff

Sample Comments:

Analysis	Hold time (days)	Expires	Comments	
Amutonia N DA. Distilled	2.8	Jul-17-19 11:47	p[-] =]	
BOD	`2	Jun-21-19 11:47	pH = 5	
Nitrate-Nitrite N.D.A. Enzymatic reduction	28	Jul-17-19 11:47	pH = 1	
Solids, TDS	7	Jun-26-19 11:47	pH = f	
Solids, TS5	7	Jun-26-19 15:47	5 = Ffg	
TKN DA	28	- 301-17-19 (1:47	pH = 1	
Total Prospinorus DA	28	Jul-17-19 11:42	pH = 1	
	-			

REVIEWED

By Amanda Wroble at 4:44 pm, Jun 20, 2019

Reviewed By

Date



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5

Project (6) (6) Swine Facility

77 West Jackson Boulevard

Chicago IL 60604

Project Number: JR-EPA Project Manager: Joan Rogers Reported:

Jul-18-19 T3:49

Nitrate-Nitrite Nitrogen, Nitrate Reductase, NECI Method N07-0003 (modified) US EPA Region 5 Chicago Regional Laboratory

S01 (1906009-01)	Matrix: Water	Samp	åed: Jun-	19-19 11:20	Receiv	red: Jur-20-1	19 11:16		
Ambre	Result	Flags / Qualifiers	MIAL	Roporting Limi	Uadts	Dilation	Ewch	Propared	Analyzsi
Nitrate-Nurite N	20.6		0.50	1.00	π.μ ² .	76	E19(90)2	Jul-16-15	Jul-01-19
B01 (1906009-02)	Marrix: Water	Samp	sled: Jun-	19-19 11:27	Recei	eed: Jun-20-	19 11:16		
Analytic	Kesalt	Flags / Qualificus	MOL	Reprincy Linis	Units	Dilutes	Hatel:	Prepared	Analyzes
Nitrate-Nitrite N	U	Į:	0.05	6.10	mgC	2	BI9GOLI	141-16-ib	je!-}}}.
S02 (190 608 9-03)	Macrix: Water	Samp	led: Jun-	19-19 11:4?	Receiv	ed: Jnn-20-1	19 11:16		
Analyse	Result	Flags (Qualifiers	۲D	Krawaliy Lims	Uraco	Deission	Batel	Fraguesi	Aaah xed
Nitrate-Nitrite N	14.2		0.50	1.09	æg'±	10	B3987612	in)-lat-lb	hil-11-19



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Faxt(3)/2)886-2591

Water Division, US BFA Region 5

77 West Jackson Boulevani

Chicago IL 60694

Project Novaber: IR-EPA

Project: (D) (6) Swine Facility

Project Manager: Joan Rogers

Reported:

Jul-08-09 13:49

Notes and Definitions

The identification of the analyse is acceptable, the reported value is an estimate.

Ð Not Detected

Not Reported

QC limit Exception



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 5 CHICAGO REGIONAL LABORATORY 536 SOUTH CLARK STREET CHICAGO, ILLINOIS 60605

Date:

8/7/2019

Subjects

Review of Region 5 Data for (b) (6) Swine Facility

Te:

Water Division, US EPA Region 5

77 West Jackson Bunlevard

Chicago, IL 60604

Prem:

Nidia Fuentes. Chemist

US EPA Region 5 LSASD Analytical Service Branch

The data transmitted under this cover memo successfully passed CRL s data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 Guidance on Environmental Data Verification and Data Validation and the U.S. EPA Region 5 RMD QMP, CRL performs date verification on all the data generated internally, CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed

Please comact the analyst with any technical report issues, Amanda Wroble at (312)-353-0375 for sample project concerns, and Sylvia Griffin at (3.1.2)-353-9073 with data transmittal questions. Thank you.

Attached are Results for:

(5) (6) Swine Facility

Analyses included in this report:

Ammonia N DA, Distilled

TENDA

Total Phospheres DA

Report Nature 1905005 Ammonta N D.s. Distilled TKN DA Total Phosphorus DA FINAL Aug 97-19 0850



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(3/12)886-2591

Water Division, US EPA Region 5

77 West Jackson Boulevard

Chicago LL 60604

Project: (b) (6) Swine Facility

Project Number: JR-HPA

Project Manager, Joan Royers

Reparted:

Aug-07-19 08:50

Accredited Analyses included in this Report



Method:

EPA 351.2 in Water

Analysis:

TKNDA

Analyte

Certifications

Total Kjeldahi Nitrogen

ISO/JEC 17025-2005

Method:

EPA 365.4 in Water

Anairsze:

Total Phospharus DA

Analyte

Certifications

Total Phosphorus

ISO/IEC 17025:2005

Method:

5M 4590-H+ B in Water

Analysis:

Ammonia N DA, Distilied

Analyte

Certifications

Aramonia as N

ISO/IEC 17025:2005

Analyses not listed above are not accredited by ANAB.



Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5

Project: (6) 6 Swine Familio

77 West Jackson Boulevard

Project Numbert JR-EPA Project Manager: Joan Rogers Reported:

Caicago IL, 60594

Aug-67-19 08:50

ANALYSIS CASE NARRATIVE

Analysis List

Total Phosphorus DA

Analyst: Nidia Fuentes Phone #: 312-353-9079

General Information

Samples analyzed:

Sample

Analysis List

1906009-01

Total Phosphorus DA

1906009-02

Total Phosphorus DA

1906009-03

Total Phosphorus DA

Rolding times:

All holding times were met.

Sample Analysis and Results

The samples were analyzed using CRL SOP AJG034B. Version #6. The samples were stored in the refrigerator at all times, except when in use. The data reported herein meets any requirements referenced in the previously mentioned SOP and Sampling QAPP titled "GENERAL FIELD SAMPLING FLAN FOR AFO_ INSPECTIONS FY 2019" and reporting request for CAFO analyses of June 2014, except for those listed in the Quality Control section.

SOP Based on:

Method List

EPA 365.4

Quality Control

All quality comrol audits were within CRL limits or did not result in qualification of the data except for any listed below.

Sample 1906009-01 spike recovery was ourside the QC limit of 79% to 124% due to the spike being diluted out. The recovery is invalid and no flag apply



Chicago Regional Laboratory

536 South Clark Street, Chicago, JL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5

77 West Jackson Boulevard

Chroszo II., 60604

Present (b) (6) Swine Facility

Project Number: TR-EPA Project Manager: Joan Rogers Reported:

. Aug-05-19 08:50

ANALYSIS CASE NARRATIVE

Analysis List

TKN DA

Analyst Nidia Forntes Phone #: 312-353-9079

General Information

Samples analyzed:

Sample

Analysis List

1906009-01

TKN DA

1906009-02

TKNDA

1906009-03

IKN DA

Holding times:

All holding times were med.

Sample Analysis and Results

The samples were analyzed using CRL SOP AIG035B, Version #8. The samples were stored in the refrigerator at all times, except when in use. The data reported berein meets any requirements referenced in the previously mentioned SOP and Sampling QAPP fitled "GENERAL FIELD SAMPLING PLAN FOR AFO INSPECTIONS FY 2019" and reporting request for CAFO analyses of June 2014, except for those listed in the Quality Control section.

The analysis of samples at the instrument started on July 11, 2019, QC data for BLK, BS and MRLrecoveries were outside the QC limits. An elevated detection limit was observed on the calibration intercept. Reanalysis of sample was done on July 15, 2019 and July 17, 2019. In the end, the data from July 15, 2019 was used since it provided the least amount of qualified data and because the samples expired on July 17, 2019.

SOP Based on:

Method List

EPA 351.2

Ouality Control

All quality control audits were within CRL limits except for, method blank (BLK), blank spike (BS), and matrix spike (MS) based below.



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Water Division, US EPA Region ?

77 West Jackson Boulevard

Chicago IL, 606(4

Project: (6) (6) Swips Facility

Project Number: JR-EPA

Froject Manager, Joan Regers

Reported:

Attg-07-19 08:50

The BS (83%) recovery exceeded the QC limit of 90% to 110%. Detected samples were flagged "L" recaning: the identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value. Non-dectect samples were flagged "UI" meaning: the analyte was not detected at or above the reported limit. The reported limit is an estimate.

The BLK (0.83 mg/L) exceeded the QC limit of 0.3 mg/L. No additional flags were applied to the samples on this basis.

The spike recovery (68%) for sample 1906009-01 (S01) failed the QC limit, the sample was diluted causing spike to be diluted out, no additional flags were necessary.



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Water Division, US EPA Region 5

77 West Jackson Boulevard

Project Inite

Project (b) (6) Swine Facility

Project Number: JR-EPA

Reported: Aug-07-19 08:50

Project Manager: Joan Rogers

ANALYSIS CASE NARRATIVE

Analysis List

Chicago IL, 60604

Ammonia N DA, Disfilled

Analyst: Nidia Foentes Phone #: 312-353-9079

General Information

Samples analyzea:

Sample

Analysis List

1906009-01

Ammonia N D.A., Distilled

1906009-02

Aumonia N DA, Distilled

1906009-03

Ammonia N DA. Distilled

Holding times:

All holding times were met.

Sample Analysis and Results

The samples were analyzed using CRL SOP AJG029B, Version #6. The samples were stored in the refrigerator at all times, except when in use. The data reported berein meets any requirements referenced in the previously mentioned SOP and Sampling QAPP titled. "GENERAL FIELD SAMPLING PLAN FOR AFO INSPECTIONS FY 2019" and reporting request for CAFO analyses of June 2014, except for those listed in the Quality Control section.

The analysis of samples at the instrument started on July 16, 2019, QC data for the instrument blanks (ICB, CCBs) and MRL recoveries were outside the QC limits. An elevated detection limit was observed on the calibration intercept. Samples were reanalyzed on July 17, 2019, In the end, the data from July 17, 2019 was used because the samples expired on July 17, 2019. The date is qualified accordingly based on the high. ICB/CCB data as listed in the quality control section.

SOP Bused on:

Method List

SM 4500-H+B

Quality Control

All quality control audits were within CRL limits or did not result in qualification of the data except for the initial and continuing calibration blanks (ICB/CCBs).



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Project. (b) 6 Swine Facility

Project Number: 78-EPA Project Manager: Joan Rogers Кервятьсі:

Artg-07-19 08:50

The ICB and CCB results (0.8 - 0.10 mg/L) exceeded the QC limits of 0.07 mg/L. As a result sample 1906009-03 was qualified ")." The other samples were not qualified because they were either non-detect or more than 10 times the ICB/CCB results.



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER

Printed: 6/20/2019 4:44:03PM

onsnoe

US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, US EPA Region 5

Project Manager:

Angela Ockrassa Davis

Project: (b) (6) Swine Facility

Project Number:

JR-EPA

Report To:

Joan Rogers

77 West Jackson Boulevard

Phone: 312-886-2785

Water Division, US EPA Region 5

Chicago, IL 60604

Fax: (312) 886-2001

Date Due:

Aug-05-19 15:00 (46 day TAT)

Received By:

Robert Snyder

Date Received:

Jun-20-19 11:16

Logged in By:

Robert Snyder

Date Logged In:

Jun-20-19 11:37

Samples Received at: Sangde vigadirees Seals Image

2.5°C Yes

Work Order Comments:

pH paper axed in SC+18D1901

Received on so-

Yes

Payerwork included

Yes Yes

Sample ID: 1906009-01

Sampled: Jun-19-19 11:20

Matrix: Water

Sample Name: S01

Sample Location/Comments: Compost Runoff

Sample Comments:

Analysis	Hold time (days)	Expires	Сошиени	
Ammonia N DA. Distilled	28	Jul-17-19 11:26	pH =)	
BOD	2	Jun-21-19]1:20	ð = Hg	
Nitrate-Nitrite N DA, Enzymatic reduction	28	Jul-17-19 11:20	pH=1	
Solids, TDS	<i>;</i>	Jun-26-19 11:20	⊋H = 6	
Sobds, TSŠ	?	Jun-26-19 11:20	pH = 6	
TKN DA	28	3yl-17-19 10:26	pH = 1	
Total Phospharus DA	. 28	Jul-17-19 11:20	pH = 1	

Sample ID: 1906009-02

Sampled: <u>Jup-19-19 11:27</u>

Matrix: Water

Sample Name; B01

Sample Location/Comments: (b) (6)

Sample Comments:

Analysis	Linid time (days)	Expires	Comments
Anuomia N.D.A., Distilled	28	Jul-17-19 11:27	्रो डि [€] }
BÓD	2	Jun-21-19 11:27	pH=4
Nitrate-Nitrite N DA, Enzymatic reduction	28	Jul-17-19 11:27	phi = 1
Sohds, TDS	7	Jon-26-19 11:27	्राध्ये = 4
Solids, TSS	7	Jun-26-19 11:27	ç <u>श्री</u> दें ल . वे

WORK ORDER

Printed: 6/28/2019 4:44:03PM

1906009

US EPA Region 5 Chicago Regional Laboratory

Client Water Division, US EPA Region 5

Project Manager:

Augela Ockrassa Davis

Project: (5) (6) Swine Facility

Project Number:

JR-EFA

Sample ID: 1966009-02

Sampled: Jun-19-19 11:27

Matrix: Water

Sample Location/Comments: (6)(6)

Sample Name: Bûi

Sample Comments:

CARCACTOR CALLESTER ANTHUS				
Analysis	Bold time (days)	Expires	Comments	
TRN DA	28	Iul-17-19 11 27		
Total Phosphorus DA	28	Jul-17-19 11:27	pE = 1	

Sample ID: 1906009-03

Sampled: Jun-19-19 11:47

Matrix: Water

Sample Name: S02

Sample Location/Comments: Field Runoff

Sample Comments:

Applysis.	Hold time (days)	Expires	Comments	
Ammonia N DA. Distilled	28	Jul-17-19 (1:47	29-1 == 1	
800	2	Jun-21-15 11 47	p H = 5	
Ritrate-Nitrite N.D.A., Enzymatic reduction	28	161-17-15 11:47	pH = 1	
Solids, TDS	7	WF-26-19 11:47	pH = 5	
Sobds, TSS	7	Jun-26-19 11.47	₽H = \$	
TEN DA	28	366-17-59 11:47	p#4 = 1	
Total Phosphoras DA	28	Rui-17-19 1:d7	हर्नुं रे च्या (

REVIEWED

By Amanda Wroble at 4:44 pm, Juni 20, 2019

Raviewed By

Date



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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Water Division, US EPA Region 5

77 West Jackson Boulevard

Chicago IL. 605(#

Project: (b) (6) Swine Profitty

Project Number: JR EPA

Project Manager, Joan Rogers

Керопес Aug-07-19 05:50

Phosphorus, Colorimetric, EPA 365.4 (modified) US EPA Region 5 LSASD Analytical Service Branch

501 () 906009-01)	Matrix: Water	Samp	ica: Jun-	19-19 11:20	Receiv	red: Jun-20-	1911:16		
Analyte	Result	Flags : Qualifiers	MDL	Roponing Làxic	Onits	Dilusion	Bauch	Prepared	Apalyzad
Total Phosphorus	3.33		0.40	1.50	mgsL	19	B19G0%]F)-(;g-1;)	}mi-1j-19
B01 (1906009-02)	Macrix: Water	Saray	ded: Jun-	19-19 11:27	Recei	ed: Jun-28-	19 11:16		
Analyse	Resuit	Flings / Qualifices	MDL	Reportus Langi	Units	O/mior-	Batch	Prepared	Asályzet
Total Phosphorus	0	an parak an kana and menang kabupat kenangga	G.64	0.15	mg/L		B19G009	101-09-19	Jaj-11-39
SB2 () 906009-03)	Matrix: Water	Samp	łeć: Jur-	19-19-11:47	Receiv	ed: Jun-26-	t9 11:16		
Analyse	Kemit	Plugs / (mahiliers	MIL	Reportati Lind:	Unis	Ditasion	Balch	Гтерат <i>⊌</i> ∂	Analyzed
Total Phesphorus	4L92		0,00	6.15	mg/L	1	B14(9985)pl-04-10)@-1j-19



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Water Division, US EPA Region 5

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Chicago JL, 60604

Minisci item

Project (b) (6) Swme Facility

Project Nuraber JR-5PA

Reported:

Phylica Manager, Joan Rogers

Aug-07-19 08:50

Total Kjeldahl Nitrogen, EPA 351.2 (modified) US EPA Region 5 LSASD Analytical Service Branch

S01 (1,906009-01)	Matrix; Water	Samp	led: Jun-l	9-19 11:20	Receiv	ed: Jun-2(+)	9 11:16		
Analyse	Resalt	Fings / Crankfiers	MDL	Reporting Limit.	Unius	Dimion	Butch	Prepared	Azəlyzəd
Total Kjeldahi Nitrogen	26,6	Ì.	3.00	5.00	mid	10	019Gb)5	Je2-0%- 19	Jui-15-19
B01 (1906009-02)	Matrix: Water	Samp	oled: Jan-	19-19 11:27	Receiv	ed: Juo-20-	19 11:36		
Analyte	Resun	Fings Qualifiers	MÜL	Reporting Limit	Caits	Taluaca	Barch	Prepared	Ann)yzeń
Total Kjeloshi Nitrogen	£.	70,1	0.36	0.50	inyl.	i	5190000]ul-{%-19	āui-[5-19
S02 (1906009-03)	histrix: Water	Samp	ded: Jus-j	(9-19-11:47	Receiv	'ed: Jan-24-'	19 11:16		
Analysi	≯costát	Figgs / Gastilvery	kT).	Reporting Line:	Urst	Пінаны	Bag)	Proportic	.Augiveuc
Total Kieldah! Nitrogen	4.77	:	0.30	\$1.5C	mgC.	÷	FIPGUR	headele	.bul-15-19



Chicago Regional Laboratory

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Water Division, US EPA Region 5

77 West Jackson Boulevard

Chicago IL, 69504

Project (b) (6) See Swine Fucility

Project Number: JR-EPA

Project Manager: Joon Rogers Aug 67-19 08.50

Reported:

Ammonia Nitrogen, SM4500B & H (modified)
US EPA Region 5 LSASD Analytical Service Branch

S01 (1906(09-01)	Matrix: Water	Matrix: Water Samplett: Jun-19-19 11:			Receiv	20et: Inn-20-1			
Arelys	Resuit	Flags: Qualifiers	MDI.	Reporting Littal:	Ciercs	Diini:118	tac	ीपामांच्यं	Araiyzos
Ammonia as N	33.3		30	3.00	FORM!	16	£19G030	lari- (16-) \$	Jul-17-15
Ammonia as N	33.3	·	1,30	3.00 evilosensensensensensensensensensensensensens	FIRST.]{;	£190 HISU	Jarle (164) ¥	
Adams we We	÷	E	tada taun 1	16.16.13.77	Ý na sin	soù lan-7ê.	1A 31.16		

B4F (1906009-02)	Matrix: Wate	r Sam	ned: Jun-	19-19 11:27	Kecen	eto: Juo-19-1	19 11:16		
Analyk	Rossult	Flags: Qualifiers	MDL	Reperting Liah	Units	Discien	Baich	ಿ.ಆಯಾದ್ರ	Analyxad
Ammonia 25 N	દ્વા		0.18	4.20	mg/1.	ž	B19000	J.C-24-18	Juj-37-19

S02 (1906009-03).	Marrix: Water	Samp	led: Jun-l	9-15 11:47	Receiv	ed: Jun-20-1	9 I(:16		
Asia tydė	Kepali	Fines : Qualificat	MDL	Repording Linus) mits	Ditanas	Satch	Propered	-Analyted
Ammonia as N	0.29		⊕ 1 2	0.24	nyzłi.	í	10.9CK26	Jul-14-19	, inj17-19

Report Name: 1906009 Ammonia N.D.A. Distilled TKN DA Total Phosphorus DA FINAL Aug 07-19-0850



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605 Phone:(312)353-8370 Fax:(312)886-2591

Water Division, US EPA Region 5

OC limit Exceeded

Project: (b) (b) Swine Facility

77 West Jackson Boulevard

Project Number: JR-EPA

Reported:

Chicago IL, 60604

0

Project Manager: 10an Regers

Aug-07-19 08:50

Notes and Definitions

U The analyse was not described at or above the reported limit. The reported limit is an estimate The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater The identification of the analyse is acceptable: the reported value is an estimate. This Quality Control measure meets the requirements of the CRL SOP for this analyte U Not Detected NR Not Reported

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